

# PRODUCT FEATURE

## Write today, write tomorrow, write to learn!

**By Jean M. Slater**

Simply defined, writing is imparting meaning through print. All of us know, however, that communicating our thoughts through print is not simple. Writing is a complex process involving cognitive, expressive language, fine-motor, and organizational abilities. Spelling, sentence construction, punctuation, capitalization, voice, sequencing ... many, many skills must be learned for one to accomplish "good writing." For students with disabilities, writing is often a bigger task.

By virtue of their disabilities, individuals may need adapted writing implements or computer access. A learning disability may impact spelling or organization. Grammatic and semantic difficulties likely affect the quality of written work. Writing may be pushed aside because of these and other factors.

This article will examine and propose strategies that will increase the opportunities for all students to write, build writing skills, demonstrate knowledge, improve classroom participation, and complete writing assignments. PixWriter, from Slater Software, will demonstrate how this is accomplished.

Even with all the emphasis and time devoted to teaching reading and writing, literacy levels of students, especially adolescents, have not kept pace with academ-

ics. Upper elementary and middle school teachers are concerned that many students in their content classes do not read and write on grade level.

To address this concern, literacy experts recommend Writing to Learn. Writing to Learn is not learning to write in that the finished product is not the goal. Instead, Writing to Learn is a catalyst for meaning making and further learning. It reduces frustration in the struggling learner, engages the student in the lesson, and deepens understanding.

Farnam, Flood, and Lapp (1994) stated: "There is no point on a [literacy] continuum that denotes too much literacy or, for that matter, not enough. There are no good or bad places to be, only places informed by children's previous knowledge and construction of literacy concepts." Dave Edyburn (2007) asks the question, "... at what point do we intervene with assistive technologies, ... in order [for a student] to engage in the higher-order processes of extracting meaning from text?"

In many ways, Writing to Learn is similar to good practices in special education. It is a way for teachers to address the skill levels of a classroom of diverse learners. Typical students write with pen/paper or with a word processor and have little difficulty writing a report for science and social studies classes. Students with disabili-

ties, students struggling with literacy, or students learning English, however, may not find the report so easy to write! Each student has his own place on the continuum, so completed assignments may range from a complete report, to single words relating to a topic, to one sentence selected via scanning. Assistive technology can play a part in helping students struggling with writing to perform at their own individual place on the continuum.

PixWriter is software for beginning and struggling writers. A word bank is available to the student to use when writing. Creating the word banks is fast – type in a word, hit the spacebar and a button automatically fills with the word and graphic. A student clicks on a button from the completed word bank to write. The new library of 9,000 high-resolution Literacy Support Pictures provides the visual support needed for understanding print, and voice output reinforces the student's selections. PixWriter's flexibility for the arrangement of words and pictures in the word bank promotes a scaffolding approach to building literacy skills.

Let's look at eight students who are below average in their literacy levels, and how PixWriter provides the support they need for successful completion of assignments in social studies and science classes.

**This article originally appeared in the October/November 2007 issue of *Closing The Gap*, Vol. 26 No. 4.**

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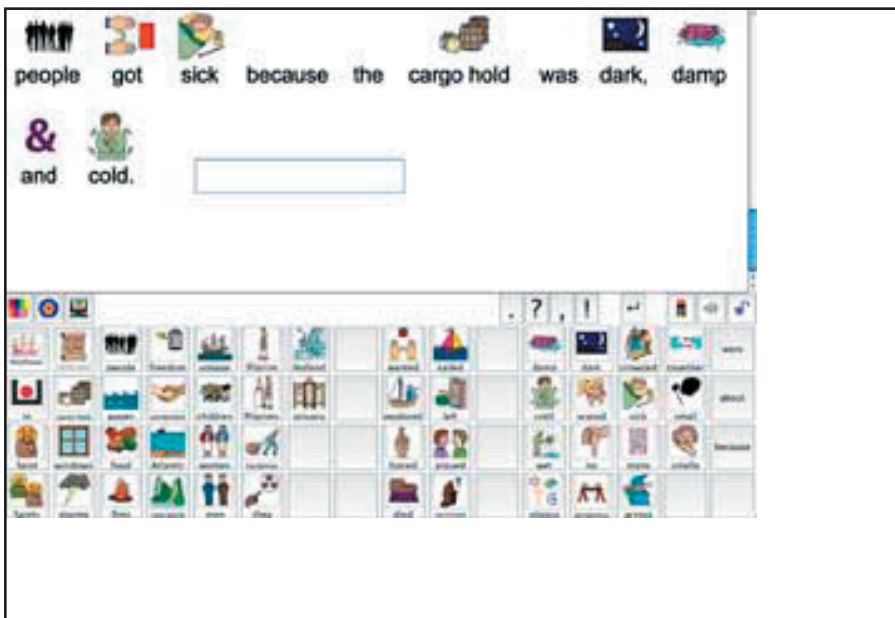


Figure 1: A glossary of vocabulary words fills this 64-space word bank, helping the student with poor spelling to complete the assigned report.



Figure 1B: One page of the report created by the student is shown.

## Student One: Mild learning disability

This student wrote a report independently on the voyage of the Mayflower using the 64-space word bank shown in Figure 1. This student usually wrote in complete sentences, but he had extreme difficulty with spelling. The poor spelling slowed down his writing so significantly that he often gave up and either did not complete assignments or handed in sub-par papers. The buttons in the word bank contain a glossary of words available for writing the report. The student used the keyboard to type words he knew how to spell, but he selected buttons (via a mouse click) when the words were needed for meaning and content. He monitored his writing via the auditory reinforcement. One page of his printed report is shown in Figure 1B.

This student needed only a few supports. He knew about capitalization and punctuation. He could independently spell some words, and he had knowledge about the lesson that he could express in writing. What about the student who is at the beginning of the writing continuum, attending the same class, and expected to turn in the same assignment?

## Student Two: Severe cognitive, physical and language delays

No Child Left Behind mandates all students must be taught content standards. Teachers must, therefore, provide instruction for students with significant disabilities in science and social studies. Our second student requires extensive support in school. Just beginning her literacy learning and also learning to scan with a switch, her completed assignment will look very different from our student with mild disabilities. Figure 2 shows the word bank this student used. A four-space array, which is a new feature of PixWriter version 3.WOW, was used. Only two buttons were filled, scanning was activated, and the student chose one of two answers about life on the Mayflower. When she made a button selection with her switch, the sentence was written in a large font with the matching large sized graphic and the sentence was read. Either choice was correct and appropriate, and her selection resulted in writing.

## Student Three: Moving up the continuum.

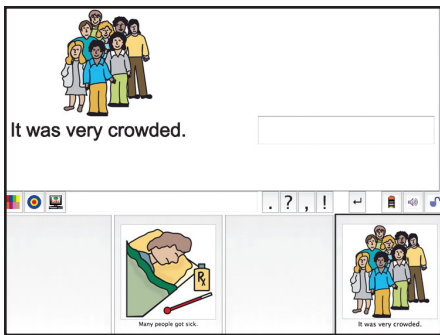


Figure 2: Four large buttons with spacing between choices, and both answers correct were necessary for this student to successfully use scanning to write.

Figure 3 shows another four-space word bank used during a lesson on Alaska's Native People. The teacher imported photos used in the lesson into the PixWriter word bank. The sentences describe the photos. This student, like the previous student, is performing at an emergent level of writing. One selection results in the expression of a complete thought.

### Student Four: Helping to create the word bank vocabulary.

PixWriter engages students in the writing process. The ease of use and the authentic writing that results, removes

barriers and lessens frustration with writing. As soon as possible, students should be included in creation of the word banks. Involving them in choosing the words for the word bank includes them in the writing process, develops skills that will later be used when outlining and story mapping, and, most importantly, gives them control of their writing. Figure 4 shows a vocabulary or Theme Ring that was made in Picture It (from Slater Software) and used in the Mayflower unit. It contains all the important words from the unit. The student indicates the vocabulary to be added to the word bank. Either the teacher or the student types the words to fill the buttons. The word bank of chosen vocabulary is seen in Figure 5.

### Student Five: Using word order and color coding.

Figure 6 shows how a word bank might be arranged for a student working on writing complete sentences. The buttons in each sentence are in left-to-right sequence and color-coded, giving the student additional cueing for successful writing. The punctuation and speech buttons have also been moved to the word bank.

### Students Six and Seven: Adding complexity to the word bank.

As students gain skills and move along the continuum, word banks will contain more filled buttons. Figures 7 and 8 show two word banks used in a science assign-

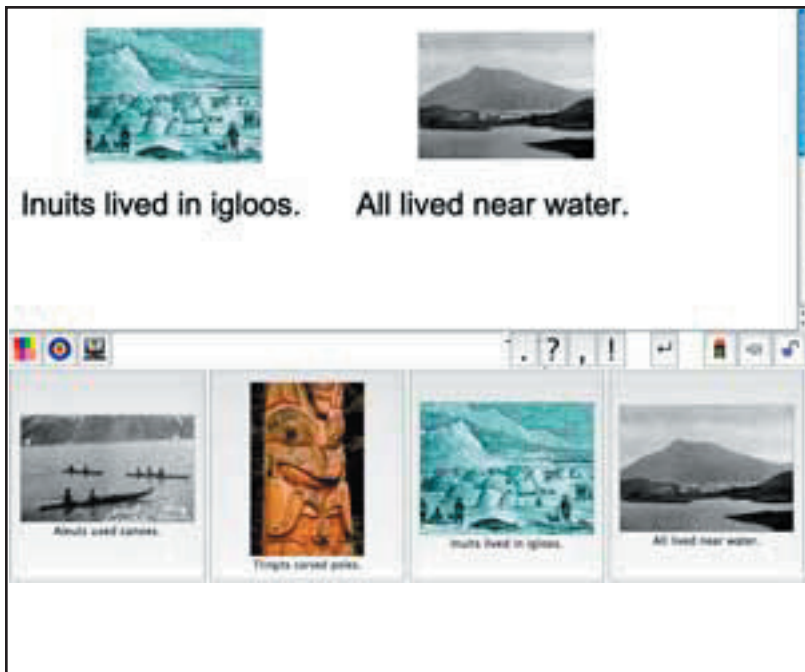


Figure 3: Imported photographs strengthen comprehension. The student was able to independently use this word bank to write about the lesson.



Figure 4: After identifying vocabulary words and concepts used in a particular unit, a Theme Ring was created in Picture It. Words in alphabetical order were easy to find.

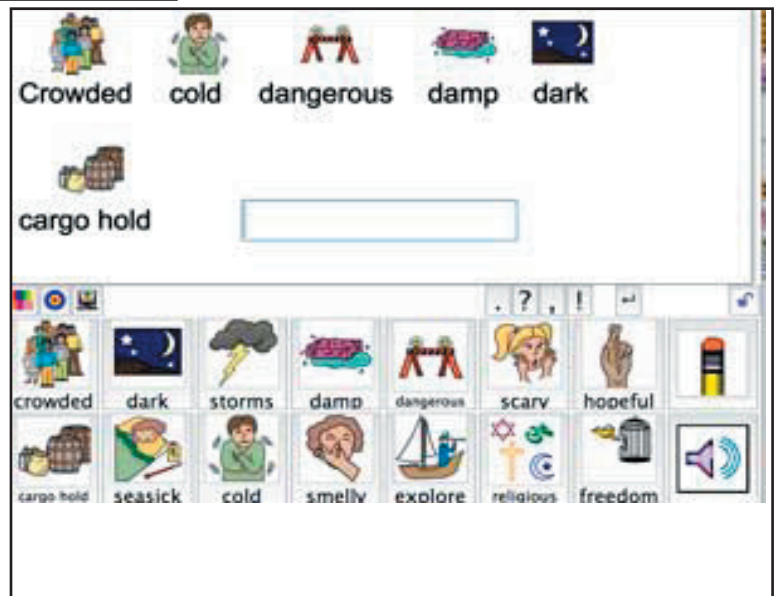


Figure 5: The student used the word bank he helped create to write a list of words about Mayflower life.



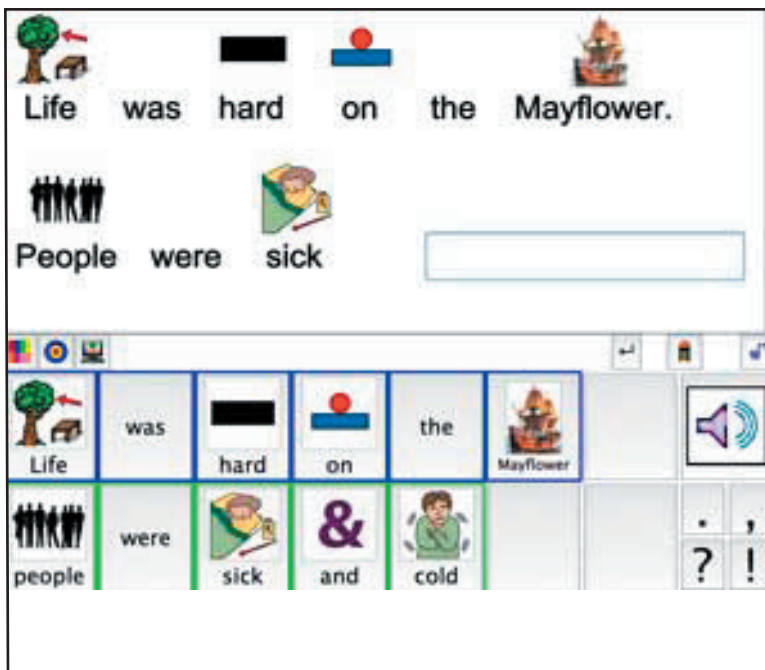


Figure 6: PixWriter enables you to color code word buttons and move the punctuation and function buttons to support the student's writing goals.

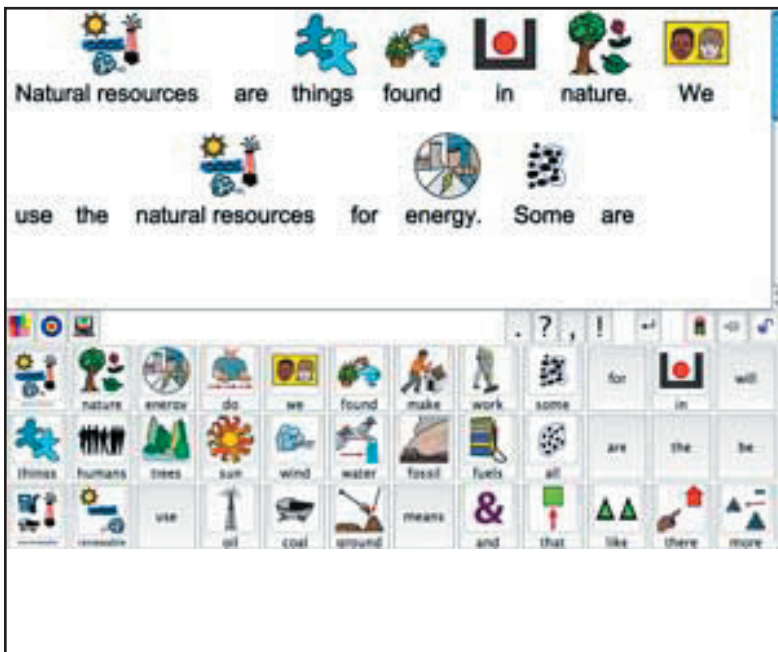


Figure 7: All buttons are filled, enabling a student to choose from a variety of nouns and verbs when writing about his knowledge of natural resources.

ment about natural resources. All the buttons in Figure 7 are filled. This student will write a report demonstrating his comprehension of renewable and nonrenewable resources.

Teachers can customize an existing word bank to meet the needs of another student in just a matter of minutes. The word bank seen in Figure 8 was adapted from the complete word bank (Figure 7) by simply deleting buttons. The arrangement

of the remaining buttons was changed slightly to accommodate the punctuation, speech, and erase buttons that now appear in the word bank. This student could visually scan the buttons and locate the vocabulary he wanted. The spaces left in the word bank helped this student use all the vocabulary, since the visual complexity had been reduced.

## Student Eight: Read and write.

Reading about a subject and then writing about it is, of course, common practice in classrooms. With the availability of information from the Internet, digital lessons are changing how students get that information. Figure 9 shows an Internet site and PixWriter together on the monitor. Because the PixWriter version 3.WOW window can be resized, it is now possible for students to reference an article while creating and/or writing with the PixWriter word bank.

Writing is a continuum of skills, and a student's performance level can be located on that continuum. Because "there are no good or bad places to be" (Farnam et al) on that continuum, we must move the student along that continuum toward conventional literacy. When writing to learn strategies are incorporated into a student's day, both student and teacher reap rewards. Students are more engaged in the lesson and student participation increases. More independence in completing writing tasks is encouraged and observed. Reading and writing skills improve, vocabulary grows and comprehension improves. Teachers know that they have added writing opportunities for students who may not have had many chances to write, because the word banks have been made for all levels of learners. Standards have been addressed, and teachers see engaged and active students.

For further information on PixWriter, Picture It, Picture-Assisted Literacy, or any of the Slater Software products, please contact the company at: Slater Software, Inc., 351 Badger Lane, Guffey, CO 80820; Phone: 877-306-6968; Web site [www.slatersoftware.com](http://www.slatersoftware.com); E-mail: [info@slatersoftware.com](mailto:info@slatersoftware.com).

## References

Edyburn, Dave. Re-examining the role of assistive technology in learning, *Closing The Gap* newspaper, 25:5, Dec 2006-Jan2007, pg 10.

Farnan, Flood and Lapp, Content Area Reading and Learning: Instructional Strategies, Lawrence Erlbaum Associates, 1994

Jean Slater is co-owner of Slater Software, along with her husband, Jim. She is a speech-language pathologist with 25 years experience working with students with mild to profound disabilities in the public schools. She has seen first-hand how picture-assisted literacy changes students' lives, self-concepts and achievements.

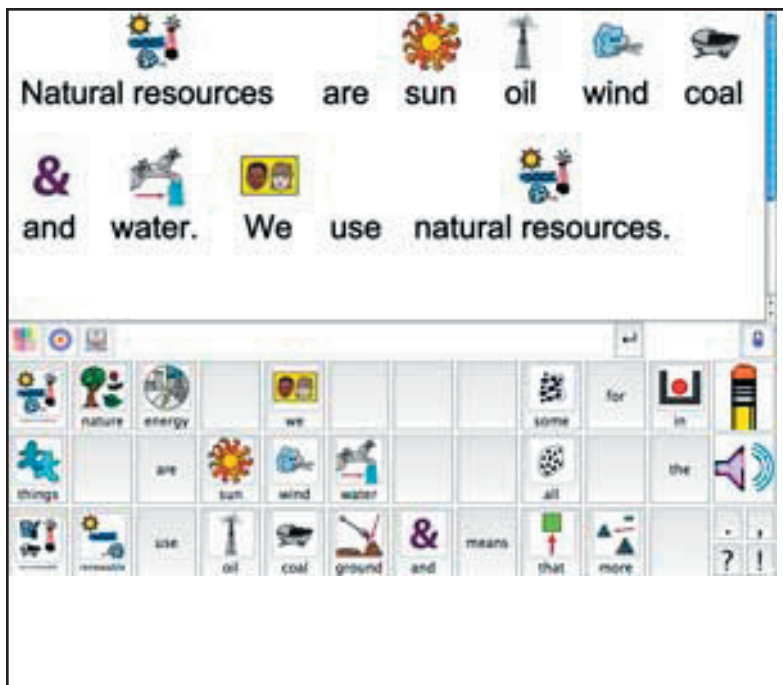


Figure 8: A less-complex word bank still allows for students to demonstrate comprehension of facts within the lesson.



Figure 9: Resizing the PixWriter window allows for multiple applications to be accessible to students or to accommodate their visual needs.